

Attorney's Docket No. RA-5256
After Final Amendment

Serial No. 09/747,036
October 26, 2004

(Previously Presented) Claim 1:

1. In a computer system having identifiable memory address spaces which may be allocated to client processes, a queue bank repository system for facilitating control of such address spaces to such client processes comprising:

a repository of said memory address spaces wherein each memory address space within said repository may be called an entry and each said entry contains a value which can be either an end-of-repository space indicator or a current value which indicates a next available entry, or said entry may contain a queue bank descriptor, and wherein said repository has a header memory value which is either a one of said current values or said end-of-repository space indicator,

a manager of said repository comprising

a functionality for generating a token wherein said token contains an indication of said header memory value and for passing said token to a client process if said client process passes or attempts to pass a queue bank descriptor to said manager for storage into one of said memory address spaces of said repository,

a functionality for storing said queue bank descriptor from said client process into a one of said memory address spaces indicated by said header memory value,

and wherein said manager further comprises a functionality for retrieving any requested queue bank descriptor from said queue bank repository upon receipt of tendered a token from any client process which has previously received said token, directly or indirectly, from said functionality for generating a token, and for sending said

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queue bank descriptor to said tendering client process to enable said tendering client process to retrieve a queue bank descriptor corresponding to said randomly requested queue bank descriptor, said functionality for retrieving any requested queue bank descriptor further comprising a functionality for placing the header for the next available entry into the returned entry from which said queue bank descriptor had been retrieved responsive to said tendered token and which functionality is also for putting the address of the returned entry into the next available entry.

(Previously Presented) Claim 2:

2. The queue bank repository system of claim 1 wherein said functionality for generating a token is an instruction and wherein said functionality for storing said queue bank descriptor from said client process into a one of said memory address spaces indicated by said header memory value is also an instruction.

(Previously Presented) Claim 3:

3. The queue bank repository system of claim 1 wherein said manager further comprises a functionality for reading a value in said one of said memory address spaces indicated by said header value and storing said value into said header prior to or contemporaneously with storing said queue bank descriptor from said client process into said one of said memory address spaces indicated by said current value so that following said storing, said current value shall contain a value that was in said one of said memory address spaces.

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(Original) Claim 4:

4. The queue bank repository system of claim 1 wherein said functionality for reading further comprises a functionality for clearing said value from said one of said memory address spaces while storing said value into said header current value.

(Original) Claim 5:

5. The queue bank repository system of claim 1 wherein said manager further comprises a functionality for reading a value in said one of said memory address spaces indicated by said header value and if said header value is said end-of-repository value, comprising a functionality for generating a status indicating the repository is full.

(Previously Presented) Claim 6:

6. The queue bank repository system of claim 1 wherein said manager further comprises a functionality for reading a value in said one of said memory address spaces indicated by said header value and if said header value is said end-of-repository value, comprising a functionality for calling an operating system to cause said operating system to allocate a new space to add to said repository and for returning a value indicative of the address of the entry in said new space wherein queue bank descriptors can be stored by a client process.

(Previously Presented) Claim 7:

7. The queue bank repository system of claim 1 wherein said repository of said memory address spaces has more than one set of said memory address spaces and uses only a portion of those of said more than one sets as said memory address space within said repository unless said portion becomes fully occupied and in such event, upon said client process

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attempting to pass or passing a queue bank descriptor to said manager for storage to said portion when said portion is fully occupied, a functionality extends said memory address space within said repository to include another one of said one set of said memory address spaces to said memory address space.

(Previously Presented) Claim 8:

8. The queue bank repository system of claim 1 wherein a said token is available in a plurality of different formats as determined by the specific implementation and wherein said formats include, but are not limited to, pointer, offset, and entry index.

(Previously Presented) Claim 9:

9. The queue bank repository system of claim 1 wherein said tokens within the repository each have a size to hold any queue bank descriptor that could be generated on the system.

Claims 10-21 (canceled without prejudice)